

ABSTRACT OF THE DISCLOSURE

**[0046]** A minimally-invasive analyte detecting device and method for using the same. The system and method employ a device having an active electrode optionally coated with a substance, and a counter-electrode that is configured at least partially surround the active electrode. The configuration of the auxiliary electrode and active electrode improves the current flow through the device and increases the sensitivity of the device. When the device is placed against the patient's skin, the active electrode is adapted to enter through the stratum corneum of a patient to a depth less than a depth in the dermis at which nerve endings reside. An electric potential is applied to the active electrode and the analyte level is determined based on the amount of current or charge flowing through the device.